



# Elcode

by tecnalia

SMART AND ACTIVE TRANSDERMAL PATCH  
FOR **DELIVERY OF ACTIVE SUBSTANCES.**

## ELCODE PATCH IS A DISPOSABLE SYSTEM FOR TRANSDERMAL DELIVERY AND CONTROLLED RELEASE OF ACTIVE SUBSTANCES.

### DESCRIPTION

ELCODE is a **smart active patch** for transdermal administration of biologically active substances. ELCODE has multiple applications in pharmacology and cosmetic treatments.

**Electrical stimuli** and **hydrogel technology** are combined in order to achieve controlled local or systemic transdermal delivery of actives.



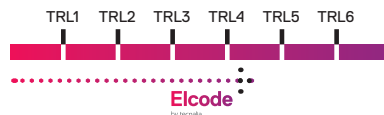
### ASSET SITUATION

→ The transdermal patch prototype is now fully developed and the active transport of substances has been confirmed, with several proof-of-concepts including: anti-inflammatory, analgesic, antiviral, anxiolytics and cosmetics.

→ *In vitro* test: a porcine skin model has been used to test delivery of various active substances.

→ *In vivo* test with hairless rats verified the efficient transport of actives using the ELCODE system.

→ ELCODE patent has been registered to protect different applications. **EP17382407.9**



## PRODUCT DIFFERENTIATION

ELCODE has significant **advantages** over current systems:

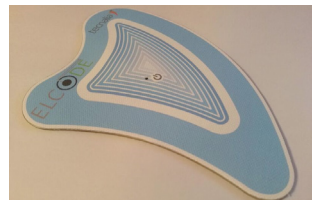
- Disposable, non-invasive, easy to use and low-cost system.
- Allows spatial-temporal controlled delivery.
- Minimizes the appearance of erythema due to the electric current.
- Increases efficacy of large molecules delivery by pulse modulation.
- Allows local or systemic delivery depending on the programmable stimulation parameters.
- Applicable in both, home and clinical environment.
- Supported by predictive simulation software.
- Supported by advanced laboratory platform DC and pulse mode with voltage and current control.



## APPLICATIONS

Three main application areas: **Pharma**, **Cosmetics** and **Wound Care**.

- Pharma: Controlled delivery of dexamethasone, sodium salicylate, acyclovir, buspirone, and lithium.
- Cosmetics: Controlled delivery of caffeine and hyaluronic acid.
- Wound care: Only electrical stimuli, microcurrent delivery.

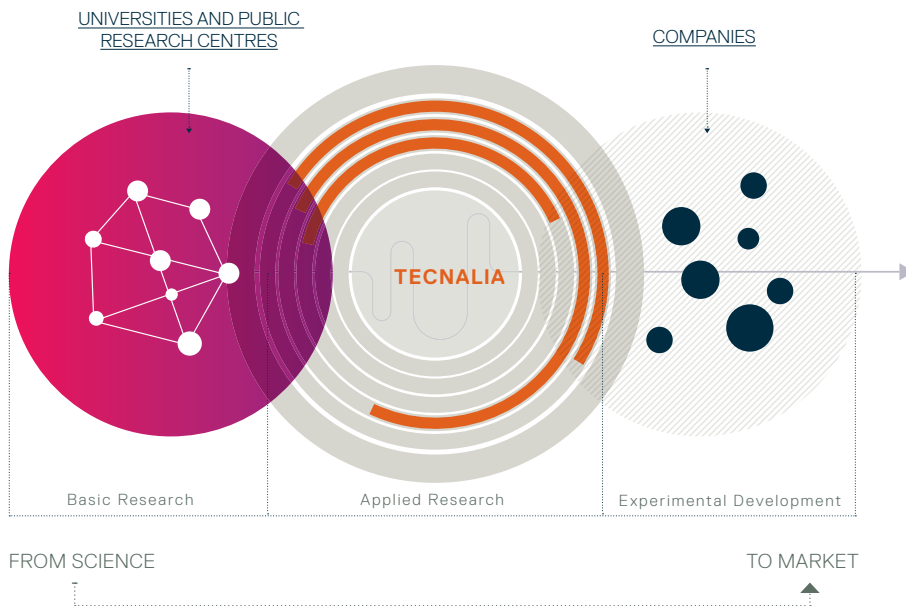


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